Ham-Space Digest   Sat, 16 Apr 94   Volume 94 : Issue   94

Today's Topics:
                Guide to the Personal Radio Newsgroups
                         NACEC-ARS Net Info.
        Two-Line Orbital Element Set: Space Shuttle (2 msgs)

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Fri, 15 Apr 1994 17:10:10 GMT
From: news.mtholyoke.edu!news.unomaha.edu!news@uunet.uu.net
Subject: Guide to the Personal Radio Newsgroups
To: ham-space@ucsd.edu

Posted-By: auto-faq 3.2.1.2
Archive-name: radio/personal-intro
Revision: 1.5 12/18/93 14:15:53
Changes: new mailing lists, .packet rmgroup, and .policy updates

(Note: The following is reprinted with the permission of the author.)

This message describes the rec.radio.amateur.*, rec.radio.cb, rec.radio.info,
and rec.radio.swap newsgroups. It is intended to serve as a guide for the new
reader on what to find where. Questions and comments may be directed to the
author, Jay Maynard, K5ZC, by Internet electronic mail at
jmaynard@oac.hsc.uth.tmc.edu. This message was last changed on 18 September
1993 to add the mailing lists for the new rec.radio.amateur newsgroups, to
note the rmgroup of rec.radio.amateur.packet, and to officially retire some
(in)famous threads of discussion on rec.radio.amateur.policy.

History
=======

Way back when, before there was a Usenet, the Internet hosted a mailing list
for hams, called (appropriately enough) INFO-HAMS. Ham radio discussions
were held on the mailing list, and sent to the mailboxes of those who had
signed up for it. When the Usenet software was created, and net news as we
now know it was developed, a newsgroup was created for hams: net.ham-radio.
The mailing list and the newsgroup were gatewayed together, eventually.

As the net grew, and as packet radio came into vogue, packet discussion began
to dominate other topics in the group and on the list. This resulted in the
logical solution: a group was created to hold the packet discussion, and
another corresponding mailing list was created as well: net.ham-radio.packet
and PACKET-RADIO, respectively.

These two groups served for several years, and went through Usenet's Great
Renaming essentially unchanged, moving from net.ham-radio[.packet] to
rec.ham-radio[.packet]. Readership and volume grew with the rest of the
network.

The INFO-HAMS mailing list was originally run from a US Army computer at
White Sands Missile Range, SIMTEL20. There were few problems with this
arrangement, but one was that the system was not supposed to be used for
commercial purposes. Since one of hams' favorite pastimes is swapping
gear, it was natural for hams to post messages about equipment for sale
to INFO-HAMS/rec.ham-radio. This ran afoul of SIMTEL20's no-commercial-use
restriction, and after some argument, a group was created specifically
for messages like that: rec.ham-radio.swap. This group wasn't gatewayed to
a mailing list, thus avoiding problems.

While all this was happening, other folks wanted to discuss other aspects
of the world of radio than the personal communications services. Those
folks created the rec.radio.shortwave and rec.radio.noncomm newsgroups,
and established the precedent of the rec.radio.* hierarchy, which in turn
reflected Usenet's overall trend toward a hierarchical name structure.

The debate between proponents of a no-code ham radio license and its opponents
grew fierce and voluminous in late 1989 and 1990. Eventually, both sides grew
weary of the debate, and those who had not been involved even more so. A
proposal for a newsgroup dedicated to licensing issues failed. A later
proposal was made for a group that would cover the many recurring legal issues
discussions. During discussion of the latter proposal, it became clear that it
would be desirable to fit the ham radio groups under the rec.radio.*
hierarchy. A full-blown reorganization was passed by Usenet voters in January
1991, leading to the overall structure we now use.

After the reorganization, more and more regular information postings began to appear, and were spread out across the various groups in rec.radio.*. Taking the successful example of the news.answers group, where informational postings from across the net are sent, the group rec.radio.info was created in December, 1992, with Mark Salyzyn, VE6MGS, initially serving as moderator.

In January, 1993, many users started complaining about the volume in rec.radio.amateur.misc. This led to a discussion about a second reorganization, which sparked the creation of a mailing list by Ian Kluft, KD6EUI. This list, which was eventually joined by many of the most prolific posters to the ham radio groups, came up with a proposal to add 11 groups to the rec.radio.amateur hierarchy in April 1993. The subsequent vote, held in May and early June, approved the creation of five groups: rec.radio.amateur.digital.misc (to replace .packet), .equipment, .homebrew, .antenna, and .space.

The Current Groups
==================

I can hear you asking, "OK, so this is all neat history, but what does it have to do with me now?" The answer is that the history of each group has a direct bearing on what the group is used for, and what's considered appropriate where.

The easy one is rec.radio.amateur.misc. It is what rec.ham-radio was renamed to during the reorganization. Any message that's not more appropriate in one of the other groups belongs here, from contesting to DX to ragchewing on VHF to information on becoming a ham.

The group rec.radio.amateur.digital.misc is for discussions related to (surprise!) digital amateur radio. This doesn't have to be the common two-meter AX.25 variety of packet radio, either; some of the most knowledgeable folks in radio digital communications can be found here, and anything in the general area is welcome. The name was changed to emphasize this, and to encourage discussion not only of other text-based digital modes, such as AMTOR, RTTY, and Clover, but things like digital voice and video as well. The former group, rec.radio.amateur.packet, should be removed by September 21st, 1993. It is obsolete, and you should use .digital.misc instead (or the appropriate new mailing list, mentioned below). The group has .misc as part of the name to allow further specialization if the users wish it, such as .digital.tcp-ip.

The swap group is now rec.radio.swap. This recognizes a fact that became evident shortly after the original group was formed: Hams don't just swap ham radio gear, and other folks besides hams swap ham equipment. If you have radio equipment, or test gear, or computer stuff that hams would be interested in, here's the place. Equipment wanted postings belong here too. Discussions about the equipment generally don't; if you wish to discuss a particular posting

with the buyer, email is a much better way to do it, and the other groups,
especially .equipment and .homebrew, are the place for public discussions.
There is now a regular posting with information on how to go about buying and
selling items in rec.radio.swap; please refer to it before you post there.

The first reorganization added two groups to the list, one of which is
rec.radio.amateur.policy. This group was created as a place for all the
discussions that seem to drag on interminably about the many rules,
regulations, legalities, and policies that surround amateur radio, both
existing and proposed. Recent changes to the Amateur Radio Rules (FCC
Part 97) have finally laid to rest the Great Usenet Pizza Autopatch Debate
as well as complaints about now-preempted local scanner laws hostile to
amateurs, but plenty of discussion about what a bunch of rotten no-goodniks
the local frequency coordinating body is, as well as the neverending no-code
debate, may still be found here.

The other added group is rec.radio.cb. This is the place for all discussion
about the Citizens' Band radio service. Such discussions have been very
inflammatory in rec.ham-radio in the past; please do not cross-post to both
rec.radio.cb and rec.radio.amateur.* unless the topic is genuinely of interest
to both hams and CBers - and very few topics are.

The rec.radio.info group is just what its name implies: it's the place where
informational messages from across rec.radio.* may be found, regardless of
where else they're posted. As of this writing, information posted to the group
includes Cary Oler's daily solar progagation bulletins, ARRL bulletins, the
Frequently Asked Questions files for the various groups, and radio
modification instructions. This group is moderated, so you cannot post to it
directly; if you try, even if your message is crossposted to one of the other
groups, your message will be mailed to the moderator, who is currently Mark
Salyzyn, VE6MGS. The email address for submissions to the group is
rec-radio-info@ve6mgs.ampr.ab.ca. Inquires and other administrivia should be
directed to rec-radio-request@ve6mgs.ampr.ab.ca. For more information about
rec.radio.info, consult the introduction and posting guidelines that are
regularly posted to that newsgroup.

The groups rec.radio.amateur.antenna, .equipment, .homebrew, and .space are
for more specialized areas of ham radio: discussions about antennas,
commercially-made equipment, homebrewing, and amateur radio space operations.
The .equipment group is not the place for buying or selling equipment; that's
what rec.radio.swap is for. Similarly, the .space group is specifically about
amateur radio in space, such as the OSCAR program and SAREX, the Shuttle
Amateur Radio EXperiment; other groups cover other aspects of satellites and
space. Homebrewing isn't about making your own alcoholic beverages at home
(that's rec.crafts.brewing), but rather construction of radio and electronic
equipment by the amateur experimenter.

Except for rec.radio.swap and rec.radio.cb, all of these newsgroups are

available by Internet electronic mail in digest format; send a mail message
containing "help" on a line by itself to listserv@ucsd.edu for instructions
on how to use the mail server.

All of the groups can be posted to by electronic mail, though, by using a
gateway at the University of Texas at Austin. To post a message this way,
change the name of the group you wish to post to by replacing all of the '.'s
with '-'s - for example, rec.radio.swap becomes rec-radio-swap - and send to
that name@cs.utexas.edu (rec-radio-swap@cs.utexas.edu, for example). You may
crosspost by including multiple addresses as Cc: entries (but see below). This
gateway's continued availability is at the pleasure of the admins at
UT-Austin, and is subject to going away at any time - and especially if
forgeries and other net.abuses become a problem. You have been warned.

A Few Words on Crossposting
===========================

Please do not crosspost messages to two or more groups unless there is genuine
interest in both groups in the topic being discussed, and when you do, please
include a header line of the form "Followup-To: group.name" in your article's
headers (before the first blank line). This will cause followups to your
article to go to the group listed in the Followup-To: line. If you wish
to have replies to go to you by email, rather than be posted, use the word
"poster" instead of the name of a group. Such a line appears in the headers
of this article.

One of the few examples of productive cross-posting is with the rec.radio.info
newsgroup. To provide a filtered presentation of information articles, while
still maintaining visibility in their home newsgroups, the moderator strongly
encourages cross-posting. All information articles should be submitted to the
rec.radio.info moderator so that he may simultaneously cross-post your
information to the appropriate newsgroups. Most newsreaders will only present
the article once, and network bandwidth is conserved since only one article is
propagated. If you make regular informational postings, and have made
arrangements with the moderator to post directly to the group, please
cross-post as appropriate.

--
Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@oac.hsc.uth.tmc.edu | adequately be explained by stupidity.
      "If my car ran OS/2, it'd be there by now" -- bumper sticker
                GCS d++ p+ c++ l+ m+/- s/++ g++ w++ t+ r

--
73, Paul W. Schleck, KD3FU

pschleck@unomaha.edu

```
------------------------------
```

All of you fellow hams seriously interested in helping handle emergency
radio message traffic, have we got a challange for you. NACEC, The
North American Center For Emergency Communications, is building a high
speed traffic system called NACEC-ARS (Affiliate Radio System).

The purpose of this net is to handle emergency traffic throughout North
America. The goal is to build a system to get traffic delivered in about
60 minutes or less from the time it is put on the network.

NACEC-ARS also helps provide initial communications support between NACEC's
Emergency Communications Field Teams and NACEC's Main Communications Center,
to be build on 216 acres in Western Minnesota.

Information & Training nets are held every Sunday and Thursday. All
stations interested in getting more information on NACEC, NACEC-ARS or
information on getting involved in helping others with your radio skills are
invited to check in. If you wish information the NSC will take your name,
calls and the type of information you have requested. Net information
follows:

   Sunday Information & Training Nets:
                  NACEC-ARS/A   19:00 UTC   3.860 Mhz   LSB
                  NACEC-ARS/B   20:00 UTC   7.262 Mhz   LSB
                  NACEC-ARS/C   21:00 UTC   14.347 Mhz   USB

   Thursday Information & Training Net:
                  NACEC-ARS/D   9 PM local MN time on the TCFMC repeater
                                            146.76 (output)

  ** If you hear a net in progress designated as NACEC-ARS/E it is an
     Emergency Traffic Net that is handling real Emergency traffic. Please
     do not interupt or check into these nets unless requested by the NCS
     or you are an authorized NACEC-ARS member station.

Hope to see all of you serious traffic handlers and others wishing to
help, from around the U.S. and Canada on the nets. We can use all the
help and support we can find to handle traffic in emergency situations.
A mountain is only one shovel of earth each for a million people. Get
involved and prepaired to help move a mountain of messages for those in need.

Thanks
73
Ed Addy/KE0EG
President
NACEC

... NACEC is "The North American Center For Emergency Communications Inc."

Date: Thu, 14 Apr 1994 16:58:03 MDT
From: ihnp4.ucsd.edu!library.ucla.edu!europa.eng.gtefsd.com!news.umbc.edu!eff!
news.kei.com!yeshua.marcam.com!zip.eecs.umich.edu!newsxfer.itd.umich.edu!
nntp.cs.ubc.ca!alberta!ve6mgs!usenet@@
Subject: Two-Line Orbital Element Set: Space Shuttle
To: ham-space@ucsd.edu

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial BBS, (513) *253-9767*, and are updated daily (when
possible). Documentation and tracking software are also available on this
system. As a service to the satellite user community, the most current
elements for the current shuttle mission are provided below. The Celestial
BBS may be accessed 24 hours/day at 300, 1200, 2400, 4800, or 9600 bps using
8 data bits, 1 stop bit, no parity.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

STS 59
1 23042U 94020A   94103.59722222 .00020013 11074-4 10581-4 0   188
2 23042 56.9942 243.9545 0009289 284.3491 103.1913 16.21418183   675
--
Dr TS Kelso   Assistant Professor of Space Operations
tkelso@afit.af.mil   Air Force Institute of Technology

Date: Thu, 14 Apr 1994 22:57:47 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!
europa.eng.gtefsd.com!news.umbc.edu!cs.umd.edu!zombie.ncsc.mil!
blackbird.afit.af.mil!tkelso@network.ucsd.edu
Subject: Two-Line Orbital Element Set: Space Shuttle
To: ham-space@ucsd.edu

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial BBS, (513) *253-9767*, and are updated daily (when

possible). Documentation and tracking software are also available on this
system. As a service to the satellite user community, the most current
elements for the current shuttle mission are provided below. The Celestial
BBS may be accessed 24 hours/day at 300, 1200, 2400, 4800, or 9600 bps using
8 data bits, 1 stop bit, no parity.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

STS 59
1 23042U 94020A   94103.59722222 .00020013 11074-4 10581-4 0   188
2 23042 56.9942 243.9545 0009289 284.3491 103.1913 16.21418183   675
--
Dr TS Kelso   Assistant Professor of Space Operations
tkelso@afit.af.mil   Air Force Institute of Technology

Date: Thu, 14 Apr 1994 20:20:47 GMT
From: ihnp4.ucsd.edu!swrinde!sgiblab!wetware!spunky.RedBrick.COM!psinntp!psinntp!
arrl.org!zlau@network.ucsd.edu
To: ham-space@ucsd.edu

References <1994Apr11.154030.25438@ke4zv.atl.ga.us>,
<1994Apr12.133436.5905@arrl.org>, <1994Apr13.142059.5398@ke4zv.atl.ga.us>
Subject : Re: Building Sat antennas

Gary Coffman (gary@ke4zv.atl.ga.us) wrote:
: In article <1994Apr12.133436.5905@arrl.org> zlau@arrl.org (Zack Lau (KH6CP))
writes:
: >
: >So how big does the boom have to be for it to work well on Oscar 13?
: >A 15 turn helix on a 20 inch boom seems to work just fine with a good
: >PHEMT preamplifier (0.33 dB system NF). On a 10 degree pass I heard
: >the beacon from ARRL HQ parking lot through the roof of W1AW quite well.
: >I read up in Kraus on the dimensions to use. The boom length includes
: >the rear mounting bracket. The receive converter is a little too
: >light to balance the antenna.

: Nurad makes a commercial version of the antenna I described (for the
: 1.9 GHz band). They claim 19 dbc for it. It's about 4 feet long and 2
: inches in diameter including the fiberglass housing and transmitter
: mount. We use a tripod bag to hold it and a tripod. The stewardess

: I don't know the gain of your helix, but I expect it's considerably
: less than 19 dbc, so you should be able to use the rod and washer
: antenna design for Oscar 13.

19 dBc on a 7.7 wavelength boom is quite good. By contrast, a
26 element K1FO yagi has only 18.8 dBi of gain on 432 MHz.
Unfortunately, I've not been able to find anything in the
literature on designing such antennas. I'm pretty sure that
segment oriented programs are useless for designing them--far
too many segments to model even a couple of parasitically
coupled disks (how much can you do with a few hundred segments?).

I'd conservatively estimate the helix gain to be 15 dBic, enough for
a gain to temperature ratio greater than 1. A helix tends to be down
a dB or two in gain from an optimized yagi, but I'm not sure that the
savings in boom length is worth making all those elements! (cut the
boom length from 20 to 17 inches) Maybe if the uplink antenna were
comparable in size (at a modest power level)....

An interesting question that comes up is the relative temperatures
of the two arrays. This is important because of the low preamplifier
noise temperature. My guess is that a helix would tend to have a
lower noise temperature. This may be enough to offset the lower
gain. An interesting exercise is to graph the receiver sensitivity
vs. noise figure at various sky noise temperatures.

--
Zack Lau   KH6CP/1   2 way QRP WAS
                            8 States on 10 GHz
Internet: zlau@arrl.org   10 grids on 2304 MHz

STS-59
1 23042U 94020A   94105.62622017 .00203357 11079-4 10947-3 0   213
2 23042 56.9933 234.1397 0007233 279.9940 80.0358 16.22652200 1014

Satellite: STS-59

```
Catalog number: 23042
Epoch time:        94105.62622017   =    (15 APR 94   15:01:45.42 UTC)
Element set:    021
Inclination:       56.9933 deg
RA of node:       234.1397 deg          Space Shuttle Flight STS-59
Eccentricity:     .0007233             Keplerian Element set JSC-021
Arg of perigee:   279.9940 deg         from NASA flight Day  7 vector
Mean anomaly:      80.0358 deg
Mean motion:    16.22652200 rev/day          G. L. Carman
Decay rate:     2.03357e-03 rev/day^2     NASA Johnson Space Center
Epoch rev:           101

(for Shuttle Elements subscription info, email: listserv@alsys.com)

--
Gary Morris          Internet: elements-request@alsys.com
KK6YB                Packet:   KK6YB @ N0ARY.#NOCAL.CA.USA.NA
San Diego, CA, USA   Phone:    +1 619-457-2700 x128


------------------------------


End of Ham-Space Digest V94 #94
******************************
```